IN THE CLAIMS

This listing of the claims replaces all prior versions of the claims in the application.

1-33. (canceled)

34. (currently amended): A nucleic acid molecule which encodes a fusion protein comprising:

a substantially complete S domain of HBsAg; and

a polypeptide comprising (a) amino acid residues 384 to 661 of an HCV-1 polyprotein; or (b) the corresponding residues of other HCV isolates; or (c) a sequence having at least about 90% sequence identity to (a) or (b), wherein said polypeptide comprises ~~an~~ native HCV epitope and is capable of eliciting an immunological response against HCV.

35. (original): The nucleic acid molecule of claim 34, wherein the substantially complete S domain is covalently attached at its amino terminus to the polypeptide.

36. (original): The nucleic acid molecule of claim 34, wherein the polypeptide comprises (a) amino acid residues 384 to 661 of an HCV-1 polyprotein; or (b) the corresponding residues of other HCV isolates.

37. (currently amended): The nucleic acid molecule of claim 34 comprising nucleotides 1992 through 3584 of SEQ ID NO:6, or a nucleotide sequence having at least about 90% sequence identity thereto, wherein said nucleic acid molecule is capable of expressing a fusion protein that comprises ~~an~~ native HCV epitope and elicits an immunological response against HCV.

38-41. (canceled)

42. (currently amended): A vector comprising a nucleic acid molecule which encodes a fusion protein comprising:

a substantially complete S domain of HBsAg; and

a polypeptide comprising (a) amino acid residues 384 to 661 of an HCV-1 polyprotein; or (b) the corresponding residues of other HCV isolates; or (c) a sequence having at least about 90% sequence identity to (a) or (b), wherein said polypeptide comprises ~~an~~ native HCV epitope and is capable of eliciting an immunological response against HCV.

43. (original): The vector of claim 42, wherein the substantially complete S domain is covalently attached at its amino terminus to the polypeptide.

44. (original): The vector of claim 42, wherein the polypeptide comprises (a) amino acid residues 384 to 661 of an HCV-1 polyprotein; or (b) the corresponding residues of other HCV isolates.

45. (currently amended): The vector of claim 42 comprising the nucleotide sequence of SEQ ID NO:6, or a nucleotide sequence having at least about 90% sequence identity to the sequence of SEQ ID NO:6, wherein said vector is capable of expressing a fusion protein that comprises ~~an~~ native HCV epitope and elicits an immunological response against HCV.

46-65. (canceled)

66. (currently amended): An immunogenic composition comprising a nucleic acid molecule which encodes a fusion protein comprising a substantially complete S domain of HBsAg covalently linked to a polypeptide comprising (a) amino acid residues 384 to 661 of an HCV-1 polyprotein; or (b) the corresponding residues of other HCV isolates; or (c) a sequence having at least about 90% sequence identity to (a) or (b),

wherein said polypeptide comprises ~~an~~ native HCV epitope and is capable of eliciting an immunological response against HCV.

67. (original): The immunogenic composition of claim 66, wherein substantially complete S domain is covalently linked at its amino terminus to the polypeptide.

68. (original): The immunogenic composition of claim 66, wherein the polypeptide comprises (a) amino acid residues 384 to 661 of an HCV-1 polyprotein; or (b) the corresponding residues of other HCV isolates.

69. (currently amended): The immunogenic composition of claim 66, wherein said nucleic acid molecule comprises the nucleotide sequence displayed in SEQ ID NO:6, or a nucleotide sequence having at least about 90% sequence identity to the sequence of SEQ ID NO:6, wherein said nucleic acid molecule is capable of expressing a fusion protein that comprises ~~an~~ native HCV epitope and elicits an immunological response against HCV.

70-76. (canceled)

77. (currently amended): A cell line that expresses a virus-like particle comprising a first HBsAg and a chimeric antigen, wherein the chimeric antigen comprises a second HBsAg which is linked to an immunogenic polypeptide, and wherein the first and the second HBsAg each comprise a substantially complete S domain, wherein said immunogenic polypeptide comprises (a) amino acid residues 384 to 661 of an HCV-1 polyprotein; or (b) the corresponding residues of other HCV isolates; or (c) a sequence having at least about 90% sequence identity to (a) or (b), wherein said polypeptide comprises ~~an~~ native HCV epitope and is capable of eliciting an immunological response against HCV.

78-79. (canceled)

80. (withdrawn): A method of producing the cell line of claim 77, the method comprising:

transfecting a cell with a vector that expresses a virus-like particle comprising a first HBsAg and a chimeric antigen, wherein the chimeric antigen comprises a second HBsAg which is linked to an HCV immunogenic polypeptide, and wherein the first and the second HBsAg each comprise a substantially complete S domain; and

culturing the cell to produce a cell line that expresses the virus-like particles.

81. (withdrawn): The method of claim 80, wherein the vector is a plasmid vector.

82. (withdrawn): The method of claim 81, wherein the plasmid vector is pCMV-II-E2661-sAg (SEQ ID NO:6).

83. (withdrawn): A method of producing a virus-like particle comprising the steps of:

culturing a cell of the cell line of claim 77 in a culture medium, whereby the cell expresses a virus-like particle comprising a first HBsAg and a chimeric antigen, wherein the chimeric antigen comprises a second HBsAg which is linked to an HCV immunogenic polypeptide, and wherein the first and the second HBsAg each comprise a substantially complete S domain; and

isolating the virus-like particle from the culture medium.

84. (withdrawn): The method of claim 83, wherein the cell is a CHO cell or a COS cell.

85. (currently amended): A vector comprising a nucleic acid sequence which encodes a first HBsAg and a nucleic acid sequence which encodes a fusion protein comprising a second HBsAg which is linked to an immunogenic polypeptide, wherein the

first and the second HBsAg each comprise a substantially complete S domain; and wherein the immunogenic polypeptide comprises (a) amino acid residues 384 to 661 of an HCV-1 polyprotein; or (b) the corresponding residues of other HCV isolates; or (c) a sequence having at least about 90% sequence identity to (a) or (b), wherein said polypeptide comprises ~~an~~ native HCV epitope and is capable of eliciting an immunological response against HCV.

86. (previously presented) The vector of claim 85, wherein an internal ribosomal entry site (IRES) precedes the nucleic acid sequence encoding the fusion protein.

87. (previously presented): The vector of claim 85, wherein the substantially complete S domain of said second HBsAg is covalently attached at its amino terminus to the immunogenic polypeptide.

88. (currently amended): The vector of claim 85 comprising the nucleotide sequence of SEQ ID NO:6, or a nucleotide sequence having at least about 90% sequence identity to the sequence of SEQ ID NO:6, wherein said vector is capable of expressing a fusion protein that comprises ~~an~~ native HCV epitope and elicits an immunological response against HCV.

89. (new): The nucleic acid molecule of claim 34 encoding a fusion protein comprising the amino acid sequence of SEQ ID NO:7.

90. (new): The vector of claim 42, wherein the nucleic acid molecule encodes a fusion protein comprising the amino acid sequence of SEQ ID NO:7.

91. (new): The immunogenic composition of claim 66, wherein the nucleic acid molecule encodes a fusion protein comprising the amino acid sequence of SEQ ID NO:7.